

05/05/02



OIPE

#2

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/042,991

DATE: 01/30/2002
TIME: 15:33:26

Input Set : A:\W123650.txt
Output Set: N:\CRF3\01302002\J042991.raw

ENTERED

3 <110> APPLICANT: Ian M. Whitehead
4 Alan Slusarenko
5 Duncan Gaskin
6 Alan Brash
7 Nathalie Tijet
9 <120> TITLE OF INVENTION: GUAVA (PSIDIUM GUAJAVA) 13-HYDROPEROXIDE
10 LYASE AND USES THEREOF
13 <130> FILE REFERENCE: 06027.0001U3
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/042,991
C--> 16 <141> CURRENT FILING DATE: 2002-01-09
18 <160> NUMBER OF SEQ ID NOS: 27
20 <170> SOFTWARE: FastSEQ for Windows Version 3.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 7
24 <212> TYPE: PRT
25 <213> ORGANISM: Psidium Guajava (guava)
27 <400> SEQUENCE: 1
28 Thr Tyr Pro Pro Ser Leu Ser
29 1 5
31 <210> SEQ ID NO: 2
32 <211> LENGTH: 476
33 <212> TYPE: PRT
34 <213> ORGANISM: Psidium Guajava (guava)
36 <400> SEQUENCE: 2
39 Met Ser Ser Thr Tyr Pro Pro Ser Leu Ser Pro Pro Ser Ser Pro Arg
40 1 5 10 15
41 Pro Thr Thr Leu Pro Val Arg Thr Ile Pro Gly Ser Tyr Gly Trp Pro
42 20 25 30
43 Leu Leu Gly Pro Ile Ser Asp Arg Leu Asp Tyr Phe Trp Phe Gln Gly
44 35 40 45
45 Pro Glu Thr Phe Phe Arg Lys Arg Ile Glu Lys Tyr Lys Ser Thr Val
46 50 55 60
47 Phe Arg Ala Asn Val Pro Pro Cys Phe Pro Phe Phe Ser Asn Val Asn
48 65 70 75 80
49 Pro Asn Val Val Val Leu Asp Cys Glu Ser Phe Ala His Leu Phe
50 85 90 95
51 Asp Met Glu Ile Val Glu Lys Ser Asn Val Leu Val Gly Asp Phe Met
52 100 105 110
53 Pro Ser Val Lys Tyr Thr Gly Asn Ile Arg Val Cys Ala Tyr Leu Asp
54 115 120 125
55 Thr Ser Glu Pro Gln His Ala Gln Val Lys Asn Phe Ala Met Asp Ile
56 130 135 140
57 Leu Lys Arg Ser Ser Lys Val Trp Glu Ser Glu Val Ile Ser Asn Leu

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58 145 150 155 160
 59 Asp Thr Met Trp Asp Thr Ile Glu Ser Ser Leu Ala Lys Asp Gly Asn
 60 165 170 175
 61 Ala Ser Val Ile Phe Pro Leu Gln Lys Phe Leu Phe Asn Phe Leu Ser
 62 180 185 190
 63 Lys Ser Ile Ile Gly Ala Asp Pro Ala Ala Ser Pro Gln Val Ala Lys
 64 195 200 205
 65 Ser Gly Tyr Ala Met Leu Asp Arg Trp Leu Ala Leu Gln Leu Leu Pro
 66 210 215 220
 67 Thr Ile Asn Ile Gly Val Leu Gln Pro Leu Val Glu Ile Phe Leu His
 68 225 230 235 240
 69 Ser Trp Ala Tyr Pro Phe Ala Leu Val Ser Gly Asp Tyr Asn Lys Leu
 70 245 250 255
 71 Tyr Gln Phe Ile Glu Lys Glu Gly Arg Glu Ala Val Glu Arg Ala Lys
 72 260 265 270
 73 Ala Glu Phe Gly Leu Thr His Gln Glu Ala Ile His Asn Leu Leu Phe
 74 275 280 285
 75 Ile Leu Gly Phe Asn Ala Phe Gly Gly Phe Ser Ile Phe Leu Pro Thr
 76 290 295 300
 77 Leu Leu Ser Asn Ile Leu Ser Asp Thr Thr Gly Leu Gln Asp Arg Leu
 78 305 310 315 320
 79 Arg Lys Glu Val Arg Ala Lys Gly Gly Pro Ala Leu Ser Phe Ala Ser
 80 325 330 335
 81 Val Lys Glu Met Glu Leu Val Lys Ser Val Val Tyr Glu Thr Leu Arg
 82 340 345 350
 83 Leu Asn Pro Pro Val Pro Phe Gln Tyr Ala Arg Ala Arg Lys Asp Phe
 84 355 360 365
 85 Gln Leu Lys Ser His Asp Ser Val Phe Asp Val Lys Lys Gly Glu Leu
 86 370 375 380
 87 Leu Cys Gly Tyr Gln Lys Val Val Met Thr Asp Pro Lys Val Phe Asp
 88 385 390 395 400
 89 Glu Pro Glu Ser Phe Asn Ser Asp Arg Phe Val Gln Asn Ser Glu Leu
 90 405 410 415
 91 Leu Asp Tyr Leu Tyr Trp Ser Asn Gly Pro Gln Thr Gly Thr Pro Thr
 92 420 425 430
 93 Glu Ser Asn Lys Gln Cys Ala Ala Lys Asp Tyr Val Thr Leu Thr Ala
 94 435 440 445
 95 Cys Leu Phe Val Ala Tyr Met Phe Arg Arg Tyr Asn Ser Val Thr Gly
 96 450 455 460
 97 Ser Ser Ser Ser Ile Thr Ala Val Glu Lys Ala Asn
 98 465 470 475
 101 <210> SEQ ID NO: 3
 102 <211> LENGTH: 480
 103 <212> TYPE: PRT
 104 <213> ORGANISM: Psidium Guajava (guava)
 106 <400> SEQUENCE: 3
 107 Met Ser Pro Ala Met Ser Ser Thr Tyr Pro Pro Ser Leu Ser Pro Pro
 108 1 5 10 15
 109 Ser Ser Pro Arg Pro Thr Thr Leu Pro Val Arg Thr Ile Pro Gly Ser

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110	20	25	30	
111	Tyr Gly Trp Pro Leu Leu Gly Pro Ile Ser Asp Arg Leu Asp Tyr Phe			
112	35	40	45	
113	Trp Phe Gln Gly Pro Glu Thr Phe Phe Arg Lys Arg Ile Glu Lys Tyr			
114	50	55	60	
115	Lys Ser Thr Val Phe Arg Ala Asn Val Pro Pro Cys Phe Pro Phe Phe			
116	65	70	75	80
117	Ser Asn Val Asn Pro Asn Val Val Val Leu Asp Cys Glu Ser Phe			
118	85	90	95	
119	Ala His Leu Phe Asp Met Glu Ile Val Glu Lys Ser Asn Val Leu Val			
120	100	105	110	
121	Gly Asp Phe Met Pro Ser Val Lys Tyr Thr Gly Asn Ile Arg Val Cys			
122	115	120	125	
123	Ala Tyr Leu Asp Thr Ser Glu Pro Gln His Ala Gln Val Lys Asn Phe			
124	130	135	140	
125	Ala Met Asp Ile Leu Lys Arg Ser Ser Lys Val Trp Glu Ser Glu Val			
126	145	150	155	160
127	Ile Ser Asn Leu Asp Thr Met Trp Asp Thr Ile Glu Ser Ser Leu Ala			
128	165	170	175	
129	Lys Asp Gly Asn Ala Ser Val Ile Phe Pro Leu Gln Lys Phe Leu Phe			
130	180	185	190	
131	Asn Phe Leu Ser Lys Ser Ile Ile Gly Ala Asp Pro Ala Ala Ser Pro			
132	195	200	205	
133	Gln Val Ala Lys Ser Gly Tyr Ala Met Leu Asp Arg Trp Leu Ala Leu			
134	210	215	220	
135	Gln Leu Leu Pro Thr Ile Asn Ile Gly Val Leu Gln Pro Leu Val Glu			
136	225	230	235	240
137	Ile Phe Leu His Ser Trp Ala Tyr Pro Phe Ala Leu Val Ser Gly Asp			
138	245	250	255	
139	Tyr Asn Lys Leu Tyr Gln Phe Ile Glu Lys Glu Gly Arg Glu Ala Val			
140	260	265	270	
141	Glu Arg Ala Lys Ala Glu Phe Gly Leu Thr His Gln Glu Ala Ile His			
142	275	280	285	
143	Asn Leu Leu Phe Ile Leu Gly Phe Asn Ala Phe Gly Gly Phe Ser Ile			
144	290	295	300	
145	Phe Leu Pro Thr Leu Leu Ser Asn Ile Leu Ser Asp Thr Thr Gly Leu			
146	305	310	315	320
147	Gln Asp Arg Leu Arg Lys Glu Val Arg Ala Lys Gly Gly Pro Ala Leu			
148	325	330	335	
149	Ser Phe Ala Ser Val Lys Glu Met Glu Leu Val Lys Ser Val Val Tyr			
150	340	345	350	
151	Glu Thr Leu Arg Leu Asn Pro Pro Val Pro Phe Gln Tyr Ala Arg Ala			
152	355	360	365	
153	Arg Lys Asp Phe Gln Leu Lys Ser His Asp Ser Val Phe Asp Val Lys			
154	370	375	380	
156	Lys Gly Glu Leu Leu Cys Gly Tyr Gln Lys Val Val Met Thr Asp Pro			
157	385	390	395	400
158	Lys Val Phe Asp Glu Pro Glu Ser Phe Asn Ser Asp Arg Phe Val Gln			
159	405	410	415	

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160 Asn Ser Glu Leu Leu Asp Tyr Leu Tyr Trp Ser Asn Gly Pro Gln Thr
161 420 425 430
162 Gly Thr Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys Asp Tyr Val
163 435 440 445
164 Thr Leu Thr Ala Cys Leu Phe Val Ala Tyr Met Phe Arg Arg Tyr Asn
165 450 455 460
166 Ser Val Thr Gly Ser Ser Ser Ser Ile Thr Ala Val Glu Lys Ala Asn
167 465 470 475 480
169 <210> SEQ ID NO: 4
170 <211> LENGTH: 483
171 <212> TYPE: PRT
172 <213> ORGANISM: Psidium Guajava (guava)
174 <400> SEQUENCE: 4
175 Met Ser Asn Met Ser Pro Ala Met Ser Ser Thr Tyr Pro Pro Ser Leu
176 1 5 10 15
177 Ser Pro Pro Ser Ser Pro Arg Pro Thr Thr Leu Pro Val Arg Thr Ile
178 20 25 30
179 Pro Gly Ser Tyr Gly Trp Pro Leu Leu Gly Pro Ile Ser Asp Arg Leu
180 35 40 45
181 Asp Tyr Phe Trp Phe Gln Gly Pro Glu Thr Phe Phe Arg Lys Arg Ile
182 50 55 60
183 Glu Lys Tyr Lys Ser Thr Val Phe Arg Ala Asn Val Pro Pro Cys Phe
184 65 70 75 80
185 Pro Phe Phe Ser Asn Val Asn Pro Asn Val Val Val Val Leu Asp Cys
186 85 90 95
187 Glu Ser Phe Ala His Leu Phe Asp Met Glu Ile Val Glu Lys Ser Asn
188 100 105 110
189 Val Leu Val Gly Asp Phe Met Pro Ser Val Lys Tyr Thr Gly Asn Ile
190 115 120 125
191 Arg Val Cys Ala Tyr Leu Asp Thr Ser Glu Pro Gln His Ala Gln Val
192 130 135 140
193 Lys Asn Phe Ala Met Asp Ile Leu Lys Arg Ser Ser Lys Val Trp Glu
194 145 150 155 160
195 Ser Glu Val Ile Ser Asn Leu Asp Thr Met Trp Asp Thr Ile Glu Ser
196 165 170 175
197 Ser Leu Ala Lys Asp Gly Asn Ala Ser Val Ile Phe Pro Leu Gln Lys
198 180 185 190
199 Phe Leu Phe Asn Phe Leu Ser Lys Ser Ile Ile Gly Ala Asp Pro Ala
200 195 200 205
201 Ala Ser Pro Gln Val Ala Lys Ser Gly Tyr Ala Met Leu Asp Arg Trp
202 210 215 220
203 Leu Ala Leu Gln Leu Leu Pro Thr Ile Asn Ile Gly Val Leu Gln Pro
204 225 230 235 240
205 Leu Val Glu Ile Phe Leu His Ser Trp Ala Tyr Pro Phe Ala Leu Val
206 245 250 255
207 Ser Gly Asp Tyr Asn Lys Leu Tyr Gln Phe Ile Glu Lys Glu Gly Arg
208 260 265 270
209 Glu Ala Val Glu Arg Ala Lys Ala Glu Phe Gly Leu Thr His Gln Glu
210 275 280 285

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211 Ala Ile His Asn Leu Leu Phe Ile Leu Gly Phe Asn Ala Phe Gly Gly
212 290 295 300
213 Phe Ser Ile Phe Leu Pro Thr Leu Leu Ser Asn Ile Leu Ser Asp Thr
214 305 310 315 320
215 Thr Gly Leu Gln Asp Arg Leu Arg Lys Glu Val Arg Ala Lys Gly Gly
216 325 330 335
217 Pro Ala Leu Ser Phe Ala Ser Val Lys Glu Met Glu Leu Val Lys Ser
218 340 345 350
219 Val Val Tyr Glu Thr Leu Arg Leu Asn Pro Pro Val Pro Phe Gln Tyr
220 355 360 365
221 Ala Arg Ala Arg Lys Asp Phe Gln Leu Lys Ser His Asp Ser Val Phe
222 370 375 380
223 Asp Val Lys Lys Gly Glu Leu Leu Cys Gly Tyr Gln Lys Val Val Met
224 385 390 395 400
225 Thr Asp Pro Lys Val Phe Asp Glu Pro Glu Ser Phe Asn Ser Asp Arg
226 405 410 415
227 Phe Val Gln Asn Ser Glu Leu Leu Asp Tyr Leu Tyr Trp Ser Asn Gly
228 420 425 430
229 Pro Gln Thr Gly Thr Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys
230 435 440 445
231 Asp Tyr Val Thr Leu Thr Ala Cys Leu Phe Val Ala Tyr Met Phe Arg
232 450 455 460
234 Arg Tyr Asn Ser Val Thr Gly Ser Ser Ser Ser Ile Thr Ala Val Glu
235 465 470 475 480
236 Lys Ala Asn
239 <210> SEQ ID NO: 5
240 <211> LENGTH: 8
241 <212> TYPE: PRT
242 <213> ORGANISM: Psidium Guajava (guava)
244 <400> SEQUENCE: 5
245 Met Ala Arg Val Val Met Ser Asn
246 1 5
248 <210> SEQ ID NO: 6
249 <211> LENGTH: 488
250 <212> TYPE: PRT
251 <213> ORGANISM: Psidium Guajava (guava)
253 <400> SEQUENCE: 6
254 Met Ala Arg Val Val Met Ser Asn Met Ser Pro Ala Met Ser Ser Thr
255 1 5 10 15
256 Tyr Pro Pro Ser Leu Ser Pro Pro Ser Ser Pro Arg Pro Thr Thr Leu
257 20 25 30
258 Pro Val Arg Thr Ile Pro Gly Ser Tyr Gly Trp Pro Leu Leu Gly Pro
259 35 40 45
260 Ile Ser Asp Arg Leu Asp Tyr Phe Trp Phe Gln Gly Pro Glu Thr Phe
261 50 55 60
262 Phe Arg Lys Arg Ile Glu Lys Tyr Lys Ser Thr Val Phe Arg Ala Asn
263 65 70 75 80
264 Val Pro Pro Cys Phe Pro Phe Ser Asn Val Asn Pro Asn Val Val
265 85 90 95

VERIFICATION SUMMARY
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L:15 M:270 C: Current Application Number differs, Replaced Current Application Number
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date